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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,026	06/21/2006	Domenico Laforgia	18628-232562	6996
26694	7590	09/18/2008	EXAMINER	
VENABLE LLP P.O. BOX 34385 WASHINGTON, DC 20043-9998			CASTRO, ARNOLD	
ART UNIT	PAPER NUMBER			
	3747			
MAIL DATE	DELIVERY MODE			
09/18/2008	PAPER			

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/584,026	<b>Applicant(s)</b> LAFORGIA ET AL.
	<b>Examiner</b> ARNOLD CASTRO	<b>Art Unit</b> 3747

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on \_\_\_\_\_.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-22 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_ is/are allowed.  
 6) Claim(s) 1-22 is/are rejected.  
 7) Claim(s) \_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 06/21/2006

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

#### **DETAILED ACTION**

##### ***Claim Rejections - 35 USC § 103***

##### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Degobert et al. US/4,796,690 in view of Alfano et al. (US/7,119,359).

3. Degobert discloses an optical system for detecting the concentration of gaseous species , comprising at least one source of ultraviolet radiation (6) and a photo detector device (11) opposite that source, between which there flows a gaseous mixture (col. 3, line 21) whereby said photo detector device is adapted to detect the concentration of the gaseous species present in the mixture through detecting the spectrum emitted by said source modified through the combined absorption and emission effect of said gaseous species (col. 2, lines 54-59).

4. However, Degobert does not expressly state the photo detector device comprises an active material based of gallium nitride, aluminum nitride, or indium nitride but rather it comprises a gallium arsenium detector.

5. Alfano et al. discloses a highly efficient high-speed photo detector made of gallium nitride, aluminum nitride, or indium nitride with multiple quantum well structures.

6. At the time of invention it would have been obvious to a person of ordinary skill in the art to incorporate the photo detector of Alfano et al in to the internal combustion engine control system of Degobert by replacing the gallium arsenium detector with the detector of Alfano et al.

7. Motivation to combine is stated in Alfano et al (col. 1, lines 30-33) to withstand the harsh environment of exhaust gases.

8. Regarding claims 3, 4, 6-13 and 16-19 the claims are considered product by process claims. The use of 35 USC 103 rejections for product-by-process claims has been approved by the courts. "We are therefore of the opinion that when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claimed in a product by process claim, a rejection based alternatively on either section 102 or section 103 of the statute is eminently fair and acceptable. As a practical matter the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith." In re Brown, 173 USPQ 685, 688 (CCPA 1972). Alfano et al. discloses the same or very slightly different product than claim by applicant.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ARNOLD CASTRO whose telephone number is (571)272-4839. The examiner can normally be reached on Flexed M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen K. Cronin can be reached on 571-272-4536. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AC  
/Stephen K. Cronin/  
Supervisory Patent Examiner, Art Unit 3747